



Know Yourself

Know Your Work



Know Your Patient

Apply Your Knowledge

John R. Droter, DDS
drdroter@mac.com
301-805-9400

LD Pankey Institute

Write your Dream

Age 13: Jaw clicking on waking

1. What kind of click did she have?
Adhesive Click "Sticky Disc"

2. Were the Joints:
Damaged

3. Were the Joints:
Actively Breaking Down

4. What damaging parafunction should have been managed/ treated?
Sleep Clenching

Age 13 Diagnosis

Parafunctional Sleep Clenching

"Sticky Disc"

TMJ damaged cartilage, actively progressing

Treatment Recommendation:

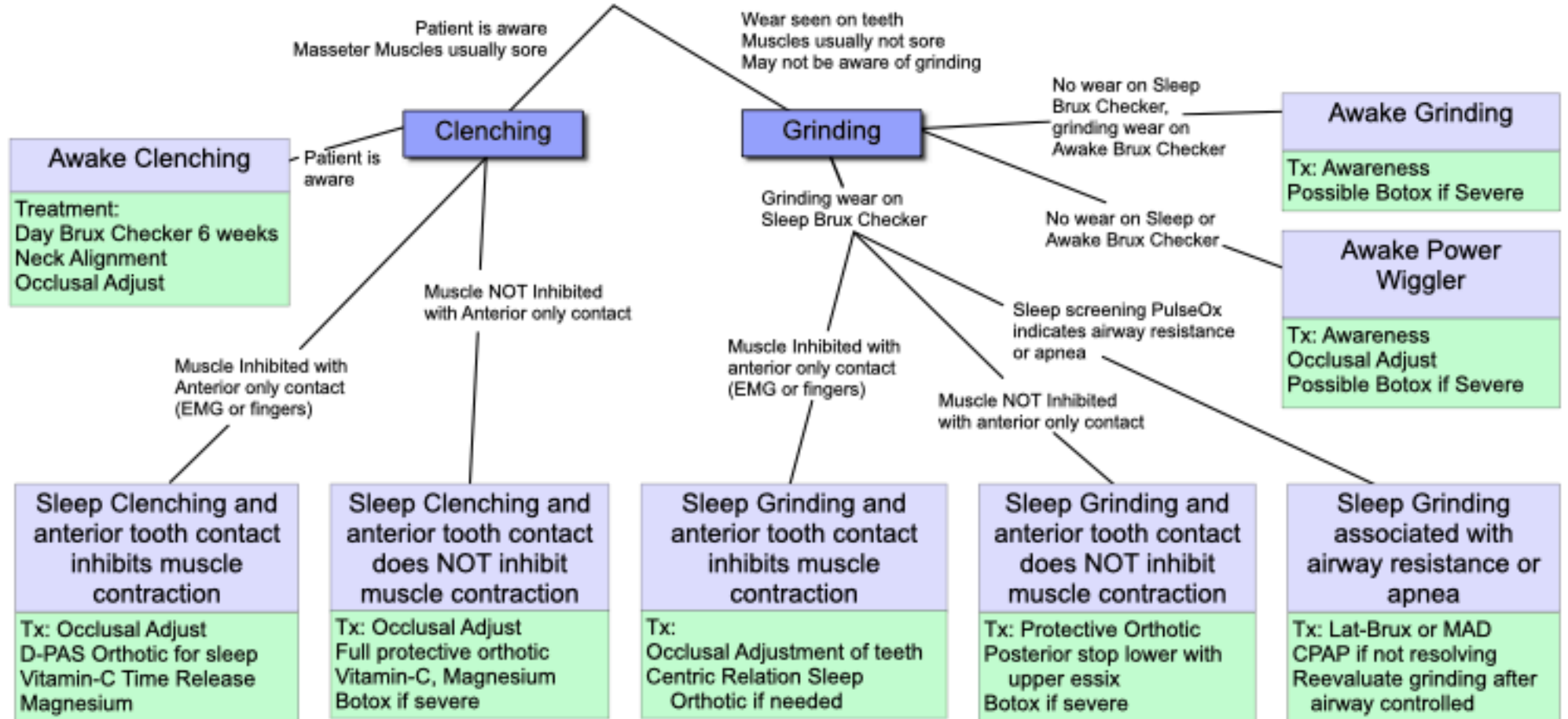
Anterior Stop night guard

Time Release Vitamin C before Sleep

Occlusal Adjustment with TekScan



BRUXING: PARAFUNCTIONAL TOOTH CONTACT





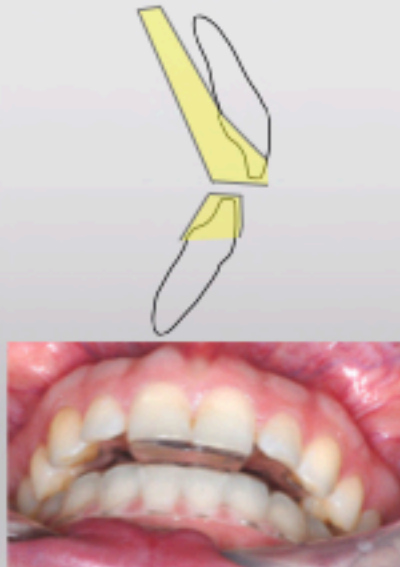
Living Tree Dental Lab
(865) 509-4509
connect@livingtreelab.com

3D Printed Orthotics

D-PAS
Diagnostic-
Palatal Anterior Stop



Brux-PAS
with lower Essix



Hard Lower Posterior Stop
with upper essix



Hard Lower Full Coverage
Centric Relation Orthotic



Age 16 Diagnosis

TMJ Damage; R4b/a, L4a
Mechanically Dysfunctional Joints
Malocclusion
Occlusal Muscle Disharmony
Cervical Instability, Probable Atlas Subluxation
Forward Head Posture, Possible Airway Issue
Weak TMJ Muscles due to fatigue and malocclusion

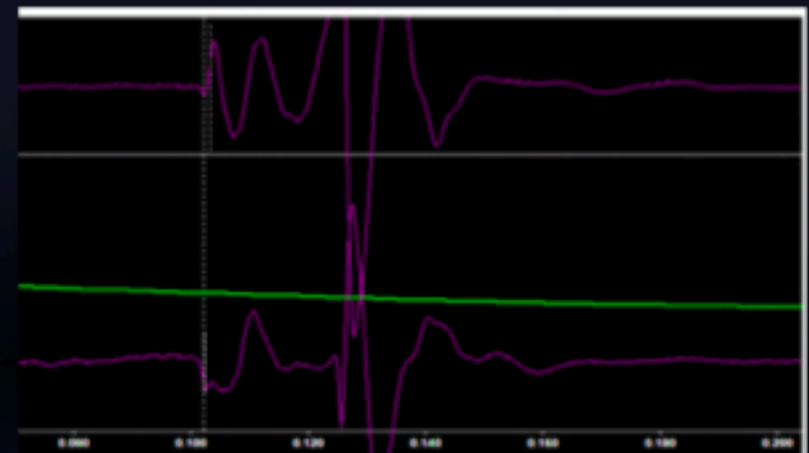
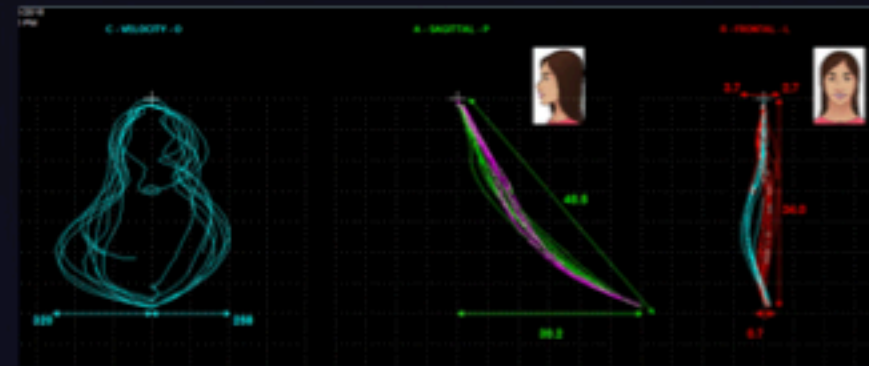
Treatment Options

TMJ Surgery- Discectomy with Fat Graft

Non Surgical TMJ Rehabilitation

Occlusal Adaptation

Occlusal Adjustment with TekScan



Age 16

My CBCT and MRI Interpretation and Recommendations

Note: Right TMJ is locking.

MR/CT Scan Summary: L4a thin disc, R4b/a thick posterior band, large disc size. Left TMJ damage appears to be older injury. Both joints damaged after puberty.

Working Diagnosis: Damage Left and Right TMJ. Left TMJ favorably adapted, Right TMJ adapting unfavorably. Right TMJ disc locking. Significant jaw dysfunction due to right TMJ locking, affecting jaw motion, chewing.

Risk of Avascular Necrosis if right TMJ locks for extended period of time.

Treatment Options: 1. TMJ surgery. 2. Nonsurgical TMJ Rehabilitation. 3. No treatment, allow joint to lock, deal with consequences at that time, risk Avascular Necrosis.

Recommendations:

Surgical Evaluation by Oral Surgeon Dr. Zebovitz.

If non surgical approach desired, would need comprehensive exam by Dr Droter

**Age 16
Start non Surgical TMJ
Rehabilitation**



**Day 1
2nd Bicuspid only contact
Temporal Bone Manipulation**



Day 3
→
**Adjust back to
2nd Bicuspid only contact
Temporal Bone Manipulation**



2 weeks and 3 days add posterior



Significant decrease in locking events

2 weeks and 3 days from start



MaxIC



Not a centric
relation orthotic.
Need joints to adapt

Right Lateral



Protrusive



Left Lateral



2 Months

Precise Protrusive
guidance in harmony
with joint damage



2 Months



5 Months

Jaw no longer locks with orthotic

Without orthotic has posterior open bite



Age 16
Start Occlusal Adaptation
Add Composite Stops #18, 31
Refine anterior guidance
Allow teeth to drift in



Age 17
10 months from Occlusal Adaptation start
Occlusal Adjust with TekScan

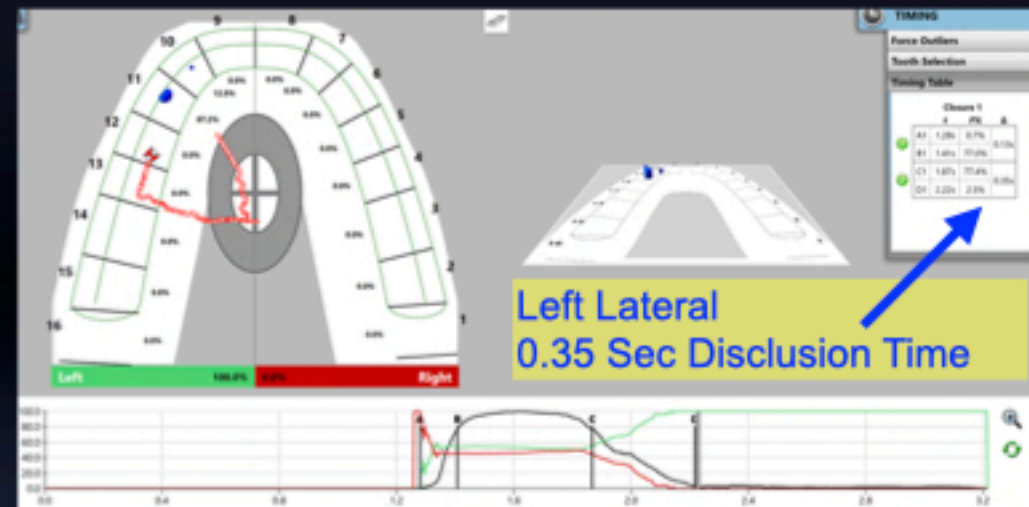
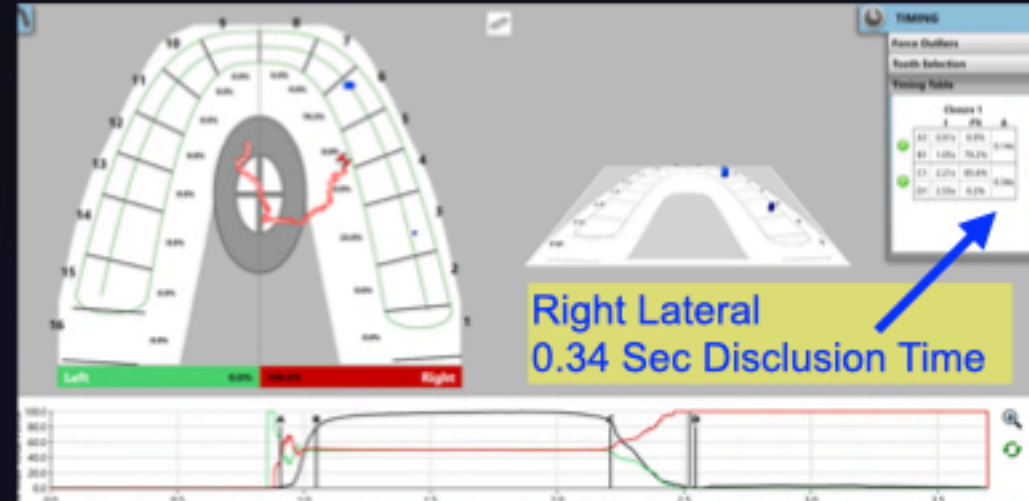
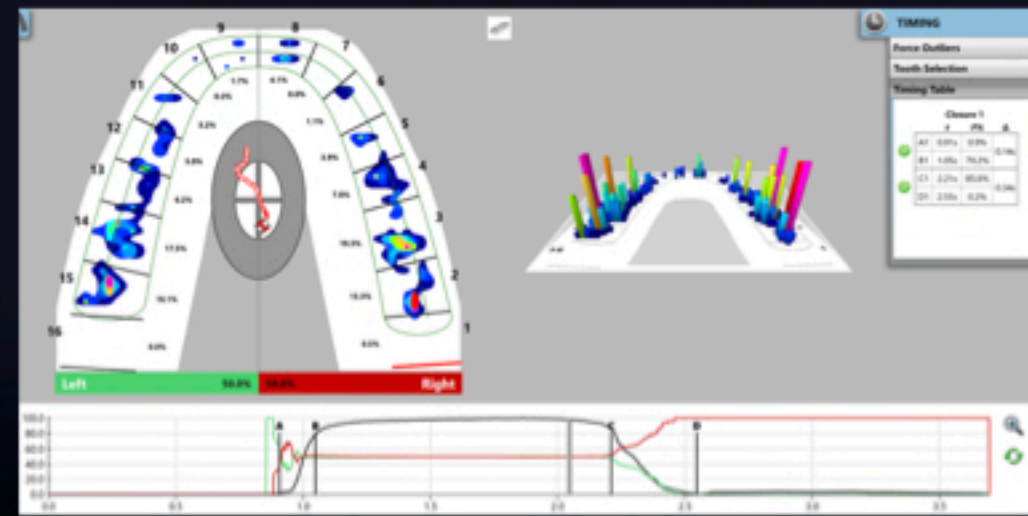


Age 17
Case Complete
Jaw does not lock
Can chew and eat what she wants
No pain



Post Occlusal Adjustment with TekScan

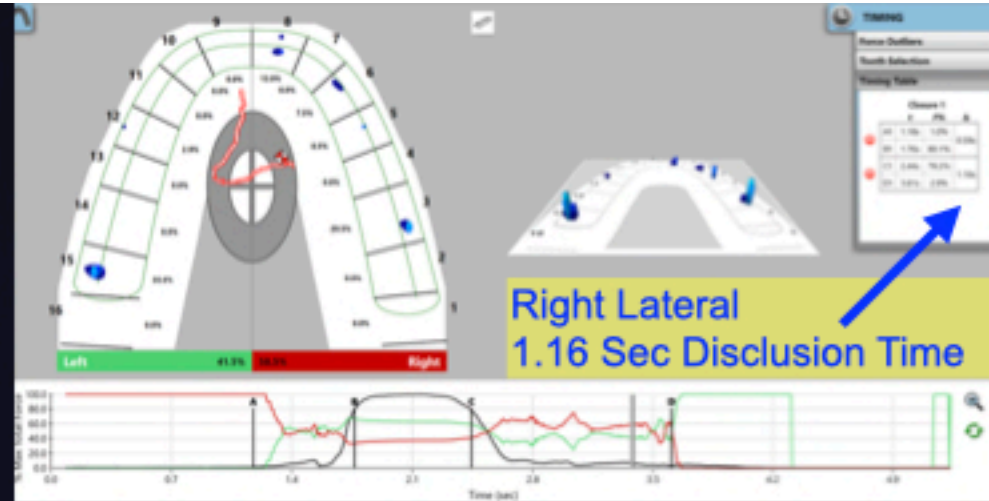
Max Intercusation
50% force on Right, 50% Left



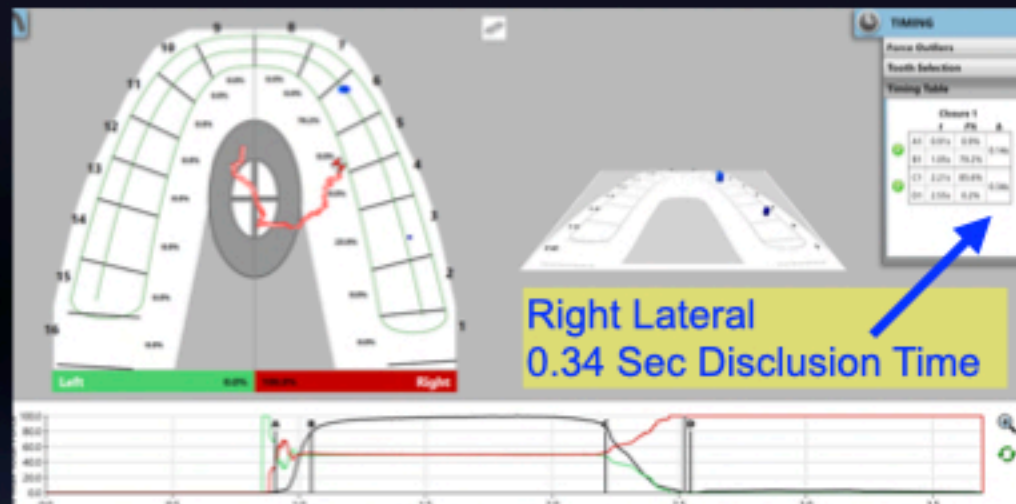
Muscle harmony occurs when disclusion is less than 0.4 seconds

Compare how fast the back teeth come apart in lateral excursions

Start Disclusion Time TekScan
1.16 seconds



Post TMJ Rehabilitation,
Occlusal Adaptation and
adjustment with TekScan
0.34 seconds



Kerstein, R. B., & Radke, J. (2012). Cranio 30(4), 243–254. Masseter and temporalis excursive hyperactivity decreased by measured anterior guidance development.

**2 year Follow up
Age 19**



**Jaw does not lock
Joints are comfortable**



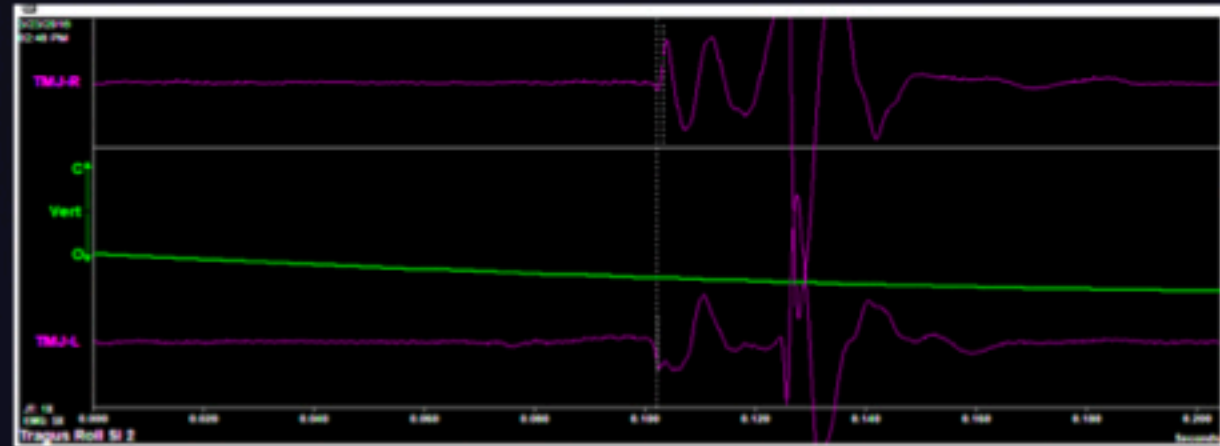
2 years post TMJ Rehabilitation

Joint Vibration Analysis: Slight wobble both joints 9.2 Pa



Age 16 Joint Vibration Analysis

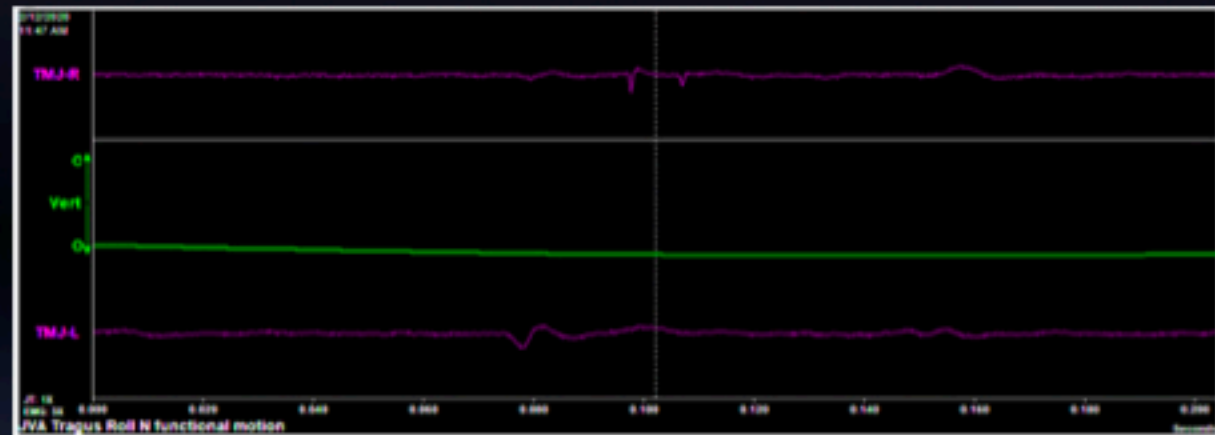
Start
Early opening click vibration Right
and Left TMJ, Complex : 148 Pa
Right jaw was locking



Age 19

2 years post TMJ Rehabilitation
Slight wobble both joints 9.2 Pa

Jaw does not lock
Smooth open and close
No pain





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